

ABSTRACT OF THE DISCLOSURE

A steel cutting apparatus includes a cutting torch that is moved in an arcuate path of constant radius so that a cutting flame of the cutting torch is always aimed at a fixed point in relation to a strand of steel at a cutting plane. Molten steel and iron oxide flow through a kerf in the steel toward a bottom corner of the strand, that is a center of the arcuate path. The rate of advance of the cutting torch along the arcuate path is controlled to compensate for at least a length of the path. The temperature of the strand in the path of the cutting flame, any edge of the strand in the path of the cutting flame, and a time remaining for cutting the strand can also be factors that influence the variable rate of advance of the cutting torch.